

XXVIII.—Description of new Genera and Species of Trapdoor Spiders belonging to the Group Trionychi. By R. I. POCK, of the British Museum.

[Plate V.]

THE subfamily Miginæ of Simon, all the species of which, so far as is known, make their trapdoor-nests upon the trunks of trees, embraces three genera—*Moggridgea*, *Migas*, and *Myrtale*. In the present paper I have ventured to add three fresh ones to the group, all of them, like *Myrtale*, coming from Madagascar. One of these, namely *Thyropæus*, is so well marked that no one can doubt of its validity; but with regard to the stability of the others I myself have some misgivings. In the first place, since they differ from each other principally in the relative size of the eyes of the front row, species intermediate between the two will very likely turn up; and, in the second place, if the figure of the carapace of *Myrtale* that M. Simon has published is inaccurate in nearly all its details, as I suspect but have no right to assume, then there can be little doubt that *Paramigas* will prove to be synonymous with *Myrtale*—perhaps even the two type species will prove identical.

Of the South-African genus *Moggridgea* four species have been described—*M. Dyeri*, Cambr., *M. Abrahami*, Cambr., *M. Tidmarshi*, Lenz, and *M. Meyeri*, Karsch. But M. Simon states that *M. Abrahami* must be transferred to the New-Zealand genus *Migas*. In this I cannot agree with him, since specimens of *M. Abrahami* from Grahamstown, sent by the Rev. N. Abraham to the British Museum in 1887, belong merely to a well-marked species of *Moggridgea*. Moreover, the assertion that the nest of this species is furnished with a back as well as with a front door, is not strictly in accordance with facts, seeing that six specimens of the nest sent with the above-mentioned spiders are of the usual one-doored type. Mr. Cambridge, indeed, mentions that only one of the two specimens examined by him was provided with a posterior door; so that we must consider it to be the exception rather than the rule in this species, as also in *M. Dyeri*, for there to be a second trapdoor.

There can, I think, be no grave reasons for doubting that the species under discussion was also described by Lenz as *M. Tidmarshi*; in which case the name employed by Mr. Cambridge has about six months' priority, and the synonymy may be set forth as follows:—

Moggridgea Abrahami, Cambr. P. Z. S. 1889, p. 41 (published in April).

Moggridgea Tidmarshi, Lenz, Zool. Anz. xii. p. 578, 1889 (published in November).

PARAMIGAS, gen. nov.

Carapace smooth and polished, moderately elevated, the area between the fovea and the eyes horizontal, a little longer than broad, the greatest width equal to the area between the eyes and the posterior border; cephalic region a little wider than the distance between its front border and the apex of the fovea. *Fovea* triangularly recurved, trifid as in *Myrtale*, but each of the side-branches only equal in length to half the width of the ocular area; the impressions at the inner ends of the cephalic grooves shallow.

Ocular area transversely oblong, twice as wide as long, the two lines about equal; the anterior slightly procurved, the median eyes of the anterior row a little larger than the lateral, round, separated by a space which is about equal to their radius, but separated from the lateral, which are oval, by a space almost equal to their diameter; the posterior lateral eyes about as large as the anterior lateral and separated from them by a narrow space, which is less than half their short diameter; posterior median small, round, about half the size of the lateral, with which they are almost in contact; distance between the anterior lateral eye and the edge of the clypeus equal to a little less than its long diameter.

Mandibles short, their upper surface rather abruptly sloped downwards from the base, inner surface flat, outer surface strongly inflated below; the lower surface, which is fringed externally and internally with long setæ, armed with two rows of teeth, 6 on the outer and 5 on the inner, those of the latter row the largest, except for the posterior tooth of the outer which is very long. *Fang* closing obliquely inwards and backwards, occupying a position intermediate between that which is typical of the Mygalomorphæ and the Arachnomorphæ; short, stout, with two cutting-edges, of which the external is serrulate, and two strong crests running along its convex surface.

Maxillæ with distinct though short apophysis, not hollowed basally for the reception of the labium, with a thick scopula along its anterior (inner) border, and the anterior half of its lower surface covered from base to apex with about 50 scattered spicules.

Labium soldered with sternum and lying in almost the same plane, the two separated by a smooth area, armed in its

distal half with about 40 spicules arranged in from four to six transverse rows.

Sternum piriform, flat, a little longer than wide, widest between the coxæ of the second and third legs, the scars (impressions) indistinct; a pair of long oval indistinctly defined scars in the posterior half of the plate and about as far from each other as from the margins of the sternum.

Legs 4, 1, 2, 3, the first and second pair much stronger than the third and fourth, and with their distal segments (patella, tibia, &c.) furnished below with a clothing of long woolly hairs; femora with normal hairs; the tibiæ, protarsi, and tarsi flat below, convex above, with a marginal external and internal row of stout close-set spines; the third and fourth legs not spiny, apically slender, and not flattened below; all the legs furnished above with hairs arranged in longitudinal lines; on the third leg the femur has a large triangular membranous area in the distal part of its lower surface; the anterior surface of the patella is covered thickly with short spiniform setæ, and similar short spinules are to be observed upon the distal end of the tibia, which has a smooth, shallow, saddle-shaped depression at its proximal end, and an upstanding ridge along its anterior edge.

The *palpi* resemble the legs of the first pair, but have no woolly clothing below and only one spine upon the proximal end of the inner edge of the tibia. *Claw* of left palp with a strong basal tooth, of right unarmed (? broken); claws of first and second legs with three teeth, of which the middle is usually the strongest; claws of third and fourth leg with one long tooth, with an accessory basal denticle on the anterior claw on the third leg.

Abdomen globular, covered with very fine short hairs. Median *spinners* slender, nearly cylindrical; exterior short, stout, with the basal segment longer than the second and third, the second a little longer than the third and hemispherical.

Paramigas subrufus, sp. n. (Pl. V. figs. 1-1 b.)

Colour. Carapace and limbs above of a rich reddish black; coxæ and sterna clear yellowish red; tarsi deep, almost blood-red; abdomen a deep bluish, greyish black.

Measurements in millimetres.—Total length of trunk 20, of carapace 8·5, width 7·3; distance of fovea from anterior margin 4·2; width of ocular area 3; length of one side of angular fovea 1·3.

Loc. Senbendrana, near Tamatave, Madagascar (*Majaster Coll.*).

This new genus, of which some of the characters given may prove, when other species are discovered, to be merely of specific value, is allied to *Myrtale* of Simon, of which but one species also, *M. Perroti*, is known (Ann. Soc. Ent. Fr. 1891, p. 300). In many points, indeed, the two are so strikingly alike that I was at first disposed to regard them as the same. But the figure of the carapace of *Myrtale*, published on p. 82 of vol. i. of 'Hist. Nat. Araignées,' makes such a reference impossible; for, if at all accurate, this figure shows that the carapace and especially the head of *Myrtale* are much narrower than in *Paramigas*, and that the branches of the thoracic fovea are much longer, the external one, for instance, being as wide as the ocular area. Simon also says that the claws of the legs in *Myrtale* have only one tooth, and that the labium is only spined at the apex, whereas in *Paramigas*, at least, its distal half is spined.

With the two specimens of this species were received two trapdoor-nests, evidently taken from the trunk of a tree. One of these is short, its length from the hinge to the base being only once and a half the width of the door and only a little greater than the width of the nest; the other one, however, is much longer, the length from the hinge being twice the width of the door. The doors are of the wafer type, and are covered, like the sides and upper surface, with moss, lichen, and pieces of bark.

MICROMESOMMA, gen. nov.

Nearly allied to *Paramigas*, *Moggridgea*, and *Myrtale*.

Carapace resembling that of *Paramigas* in having the cephalic sulci well developed, but the fovea, which is so deep in *Moggridgea*, shallow; posterior portion of carapace marked with three pairs of marginal impressions; the median impression of the fovea not so deep as in *Paramigas*.

Eyes arranged as in *Paramigas*, but the anterior median less than half the size of the anterior lateral, which are relatively enormous and nearly spherical; the distance between the anterior median eyes about equal to their diameter; posterior laterals minute, barely half the size of the anterior medians, and noticeably smaller than the posterior medians, which, although elongate, are about as large as the anterior medians.

Mandibles, maxille, labium, and sternum as in *Paramigas*, but the sternum distinctly less narrowed between the coxæ of the first pair of legs; *coxæ* of the second and third legs armed posteriorly at the base with a distinct cluster of spinules; indications of these on the coxæ of the first leg.

Legs and palpi as in *Paramigas*, but the legs not woolly beneath; the impression of the upper surface of the tibia of the third deeper, and a cluster of spinules at the distal end of the upper surface of the first and second tibiæ; a couple of slender spines on the lower surface of the protarsus of the fourth; claws of first and second legs armed with a couple of long teeth, those of the third leg with one long tooth and a small one behind it, that on the fourth with one long tooth.

Abdomen and spinners as in *Paramigas*.

Micromesomma Cowani, sp. n.

Colour deep yellowish brown throughout, a little paler below; abdomen blackish grey.

Measurements in millimetres.—Total length of trunk 16·5, of carapace 5·5, width of latter 5; length of first leg 11, of second 10, of third 9·5, of fourth 13.

Loc. Central Madagascar (*Rev. Deans Cowan*).

THYROPÆUS, gen. nov.

Carapace very slightly longer than wide, smooth, with cephalic region high, wide, and convex, with the sides nearly perpendicularly sloped, widest between the coxæ of the second pair of legs, very strongly narrowed backward from this point. *Fovea* as in *Paramigas*, but not angular, only lightly recurved, the median impression projecting further backwards than the lateral; the cephalic sulcus and impressions shallow. *Ocular area* very wide, half the length of the carapace and about twice the width of the fovea; eyes of anterior row straight, of posterior row slightly recurved and not so wide; all the eyes small, the lateral particularly being indistinct; the median eyes on a very low tubercle, separated by a space which is slightly larger than their diameter, but which is barely one third of the space between them and the lateral, which are smaller and very narrow, almost linear; the posterior lateral also nearly linear, separated from the anterior lateral and from the posterior median by spaces which are a little greater than the distance between the anterior medians; the posterior median eyes a little smaller than the anterior median. *Clypeus* very large, its length equal to the distance between an anterior median and anterior lateral eye.

Mandibles constructed as in *Paramigas*, but relatively stronger; the inferior edge armed externally with 3 or 4 strong teeth and internally with 4; the space between them finely denticulate; some of the setæ on the inner surface

of the mandible at the base of the fang stiff and spiniform; external edge of fang not serrulate.

Maxilla furnished with a long distal apophysis; a few long slender spinules intermixed with the hairs of the scopula extending along its anterior edge.

Labium large, conical, its width at the base equal to its length, armed only at the apex with spinules; united with the sternum, but separated from it by a conspicuous, transverse, smooth, pale, shallow depression.

Sternum cordiform, but less narrowed in front than in *Paramigas*, its width between the coxæ of first legs greater than half its greatest width between the coxæ of the second and third pairs. Two very conspicuous scars*, consisting of short crescentic impressions in the anterior half of the sternum, about as distant from each other as each is from the edge; the rest of the impressions obsolete.

Palpi and anterior two pairs of *legs* as in *Paramigas*, but not woolly below, and the tibia of the palp with several spines on its inner edge; the third and fourth pairs, however, much stronger than the first and second, as in *Pachylomerus*, *Idiops*, &c.; femur of the third almost wholly membranous below, its tibia deeply impressed at the base and shorter than the patella when measured along the upper surface; claws of first two pairs of legs armed, as in *Paramigas*, with one large and one or two smaller teeth; those of the third and fourth pairs armed with one enormous tooth, which is as large almost as the curved half of the principal claw; anterior claw of the fourth smaller than the posterior and directed forwards; the inferior claw on the third leg small.

Abdomen and *spinners* as in *Paramigas*.

Thyropæus mirandus, sp. n. (Pl. V. figs. 2-2 b.)

Colour. Carapace olive-brown; legs blacker; anterior coxæ and anterior part of sternum deep brown, posterior part of sternum and posterior coxæ much paler; abdomen brownish grey.

Measurements in millimetres.—Total length of trunk 43, of carapace 18; width of carapace 16.5; distance of fovea from anterior border 11; width of ocular area 8.5; length of clypeus 3; length of palp 20, of first leg 30, of second 28, of third 28, of fourth 35.

* Typically, or, rather, primitively, in spiders of this group there seem to have been four pairs of sternal scars placed close to the coxæ of the palpi and first three pairs of legs. Those opposite the palpi become the groove between the labium and the sternum.

A single female specimen from South Central Madagascar (*J. Last Coll.*).

This is, perhaps, one of the best-marked genera of trapdoor spiders that has been described for some years. Unfortunately nothing is known for certain of its habits; but, from its structural features, there can be little doubt that it resembles *Moggridgea*, *Myrtale*, and *Paramigas* in building its home on the trunks of trees. But, although approaching the genera just mentioned in many particulars, it yet presents many points of likeness, although perhaps not in every case of affinity, with many other genera of Ctenizidæ. For instance, its small scattered eyes remind us of *Eriodon*, its maxillary apophyses recall those of *Stasimopus*, and its long clypeus suggests the same area in *Bothriocyrtum*.

NEOCTENIZA, gen. nov.

Carapace polished, sparsely hairy; fovea deep, transverse; cephalic region strongly elevated and convex; ocular area wide and transverse; eyes rather scattered, anterior median the smallest of the set, separated by a space which is greater than their diameter and barely half the distance between these eyes and the anterior lateral; the two lateral eyes subequal in size and separated by a space which about equals their short diameter, the posterior median larger than the anterior median and nearly midway between them and the posterior lateral; anterior line of eyes slightly procurved, posterior slightly recurved and a little wider. *Clypeus* narrow, sloped, and bristly.

Mandibles furnished apically with glistening red hairs, which become spiniform below; the apophysis long and armed with half a dozen or more strong and longish teeth; its lower border armed with two rows of about six or seven teeth, which become intermingled behind; fang for the most part smooth and polished.

Maxille longer than wide, with a conical distal apophysis, internally scopulate, below covered with spiniform setæ, but only furnished with about a couple of denticles on the front edge of the proximal surface.

Labium conical, convex, armed only with stout setæ, its two sides continuing the slope of the sides of the sternum.

Sternum widest just behind the coxæ of the second legs, strongly narrowed forwards from this point, its anterior part marked with a deep longitudinal groove, which is continuous with the groove defining the labium, and forms with it a Y-shaped sulcus. The sternal scars very indistinct, the an-

terior pair small, close to the edge of the sternum, the remaining two pairs represented by indistinct elongate naked areas extending from near the edge towards the centre of the sternum.

Legs: third and fourth pairs stronger than first and second pairs; tarsi and protarsi of first and second pairs thickly and strongly spined on their margins, scantily hairy below; tibiae of the legs furnished with a few spines in the same position; in the third leg the femur is enormously stout, its width being about three quarters of its length; the patella thickly covered in front and above with stout short spines, forming a regular comb along the distal border; the tibia also, which is much shorter than the patella, armed in the same way in front and above with two clusters of spines; protarsus much thinner than the tibia, armed above with two series of spines and one long distal spine below; tarsus unarmed; femur of fourth leg armed apically above and anteriorly with a small cluster of spines; patella with a few spines intermingled with setæ, tibia unarmed except for a few setiform spines below; protarsus armed with many long spines; tarsus unarmed; *claws* armed with one very long tooth, behind which on the third and fourth leg there is an additional spinule and one in front of it on the anterior claw of the first and second leg; the inferior claw long and strong.

Palp with tarsal segment strongly spined from base to apex without and within; a number of spines, too, on the anterior aspect of the tibia and a few on its posterior aspect.

Genital plate mesially thick, horny, and black.

Spinners conical, the basal segment longer than the two distal segments, of which the apical is the shorter.

This genus is most nearly allied to *Cyrtocarenum*, but certainly differs in the width of the ocular area and in the form of its sternal impressions.

Neecteniza Sclateri, sp. n. (Pl. V. figs. 3-3 b.)

Colour yellowish brown on the carapace and limbs, blackish grey upon the abdomen.

Measurements in millimetres.—Total length of trunk 14·5, of carapace 6·5, width of latter 5·5; length of first leg 10, of second 10, of third 10·5, of fourth 13·2.

Loc. Demerara. A single female example obtained by Mr. W. L. Sclater.

ANEMESIA, gen. nov. (Pl. V. fig. 4.)

Allied to *Nemesia*, *Hermacha*, and *Rhachias* in having the

claws furnished with two rows of teeth, the posterior tarsi hairy and not spined, and the space between the lateral eyes narrow. Tarsal claw obsolete on the legs of the first pair, distinct on the others. Maxillæ armed basally on the inner side with a cluster of spinules. The posterior sternal impressions, *i. e.* those corresponding to the legs of the third pair, elongated, large, about twice as far from each other as from the lateral margin; the impressions opposite the second legs small, but removed from the margin.

Clypeus narrow, but vertical. Eyes not raised on a tubercle; the ocular area large and transverse; anterior line of eyes slightly procurved; lateral eyes larger than anterior median. Fovea deep, transverse.

Mandibles without anterior angular prominence; the margin above the base of the fang armed with a thick cluster of setiform spines, without the thick spines observable in *Nemesia*; fang long, distinctly geniculate at the base.

Type *Nemesia tubifex*, Pöc. Tr. Linn. Soc., Zool. v. pt. 3, pp. 112, 113, pl. xiii. fig. 2, from Gulran.

According to Dr. Aitchison this species does not close the aperture of its burrow with a movable lid. In this particular it differs from all the known species of *Nemesia*.

Genus ACTINOPUS, Perty.

Actinopus Hartii, sp. n.

Colour. Carapace greenish chestnut, mandibles rather darker; abdomen greyish black above, pale at the sides and below; femora of legs and palpi the same colour as the carapace; the rest of the segments clear yellowish red; sternum and coxæ pale yellow; maxillæ and labium reddish brown.

Eyes apparently as in *A. scalops* of Simon, the anterior and posterior rows equal in width; the anterior row almost straight, with a slight procurvature; posterior row recurved; eyes of the latter row close together, the median subequal to or a little smaller than the lateral; anterior lateral larger than median and separated from the edge of the clypeus by a space which evidently exceeds their diameter; median eyes separated from each other by a space which about equals their diameter, and from the laterals by a space about four times as great.

Mandibles smooth above externally, hairy internally; hairs stouter above the base of the fang; the apical process (rastellum) long, more than a third of the length of the fang, studded with blunt short processes, which are longer on its inner edge at the apex; fang stout, four-sided, striate; lower

edge of mandible furnished with an external edge of 6 stout blunt teeth and an inner one of 4 or 5, of which the apical is the stronger, and on the inner side of the latter row with two irregular rows of smaller teeth.

Labium long, conical, thickly clothed in its distal half with stout hairs, amongst which at the apex there is a thick cluster of spinules, which appear to have arisen from the fracture of stout setæ. *Maxillæ* all along their inner border clothed with setæ intermixed with spinules.

Sternum with a deep smooth median depression on its anterior half; from the posterior end of this three pairs of shallower impressions, representing the normal muscular scars, radiate in the direction of the coxæ of the first, second, and third legs.

Palpi as long as the legs of the first pair, but stouter; patella armed with a few spines amongst the setæ on its inner surface; the tibia and tarsus with an external and internal cluster of stout short spines, which are much more numerous on the tarsus. In the first and second legs the tarsi and protarsi are armed like the tarsus of the palp; the tibia of the first has from 8 to 12 spines in front and about the same number behind, of which the two lowest are the longest; tibia of second leg with from 1 to 3 spines in front and a cluster of spinules behind, of which one of the lower is very long. Patella and tibia of third marginally spined above, the protarsus and tarsus also thickly spined, especially posteriorly; patella of the fourth spinulose in front; tibia unarmed, protarsus with a few long spines anteriorly in its distal half; tarsus also thickly spined in front. *Claws* of palp unarmed; of leg with a single basal tooth, which is smaller on the posterior legs.

Measurements in millimetres of type specimen.—Total length of trunk 23, of carapace 10, width 9·5; length of appendages from base of femur: of palp 17, of first leg 17·2, second leg 17·5, third leg 18, fourth leg 22·5.

Loc. Trinidad (*J. H. Hart*).

In the *Ann. & Mag. Nat. Hist.* (6) xi. p. 409, I identified the specimens here described as *A. scalops*, Simon (*Ann. Soc. Ent. Fr.* 1889, p. 177); but the figure that I gave of the nest (pl. xix. fig. 3), with its peculiarly thickened hinge, does not tally with that of the nest of *A. scalops* published by Simon. The specific characters, too, of *scalops* do not seem applicable to *S. Hartii*. For instance, we are led to infer that the tibia of the second leg is unarmed in front and that the tibia of the first has fewer spines in *scalops* than in *Hartii*.

It is interesting to record that in young specimens 11 millim. in length the spine-armature of the appendages is weaker and

the anterior lateral eyes are close to the edge of the clypeus and are relatively larger, and that the anterior line of eyes is slightly wider than the posterior. The young thus seem to occupy the same relations towards the adult that *valenciana*, Sim., does towards *scalops*.

EXPLANATION OF PLATE V.

Fig. 1. *Paramigas subrufus*, gen. et sp. n., ♀, nat. size.

Figs. 1 a, 1 b. Ditto. Two views of nest.

Fig. 2. *Thyropæus mirandus*, gen. et sp. n., ♀, nat. size.

Fig. 2 a. Ditto. Sternum.

Fig. 2 b. Ditto. Maxilla.

Fig. 3. *Neocteniza Sclateri*, gen. et sp. n. Eyes (lateral eyes a little too prominent).

Fig. 3 a. Ditto. Side view of carapace.

Fig. 3 b. Ditto. Labium and part of sternum.

Fig. 4. *Anemesia tubifex* (Poc.), gen. nov. Sternum.

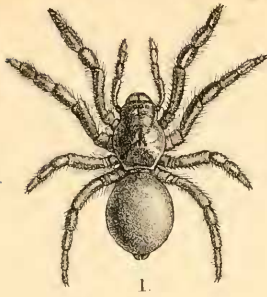
XXIX.—Description of a new Species of Squirrel from Central Africa. By W. E. DE WINTON.

BY the kind permission of the authorities of the British Museum I have been enabled to examine the series of African Squirrels in the National Collection; and though I contemplate publishing full notes later on, I now describe one species the distinctiveness of which has hitherto been overlooked.

The specimens were obtained by Emin Pasha, and I name the species in his honour.

Sciurus Eminii, sp. n.

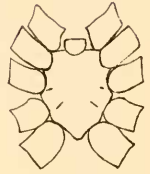
In form and general distribution of colour resembling *S. pyrrhopus* (F. Cuv.), but considerably smaller in size and much plainer in colouring. The outer-fur of the back and sides is black, with a subterminal band of golden olive, the soft under-fur being slate-black tipped with golden brown; a very narrow pale stripe on either side runs from the shoulder to the hip, formed by the outer-fur of this part lacking the black tips; the sides of the face from the nose to the ears, embracing the eyes, the fore and hind limbs, foxy red, the border-lines not sharply defined; the crown of the head and front of the face more rufous than the back, the hairs being still black but banded with reddish instead of golden olive; the jowl is yellowish; the chin orange; the throat, belly, and inner side of legs, white more or less suffused with red, the inner side of the hind legs being orange-rufous save for the under-fur, which is always white; there is no sharp line



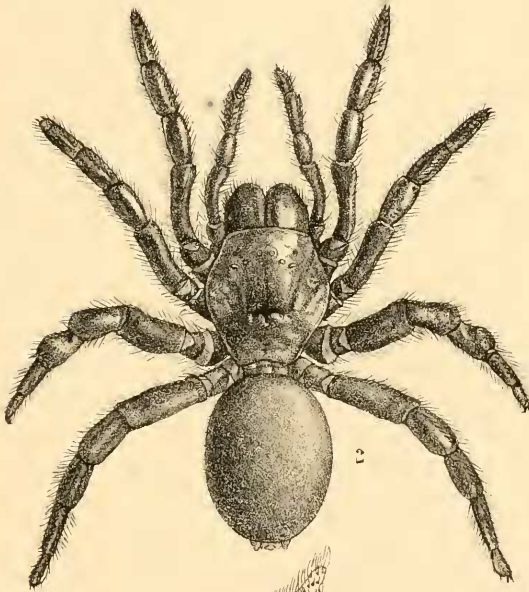
1.



3a.



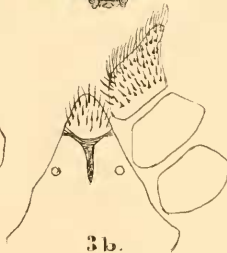
4.



2.



2a.



3b.



2b.



1b.



3.



1a.